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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,292	10/14/2003	Giuseppe Calarco	854063.736	9819

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EXAMINER	
WU, XIAO MIN	

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/685,292	**Applicant(s)** CALARCO ET AL.	
	Examiner XIAO M. WU	**Art Unit** 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 10/14/03 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/15/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 9, 11-14, 16-20, 23-27, 30-31, 33-34 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang (US 2004/0066371).

As to claims 1, 16, 18, 23-26, 30, 33-34, Huang discloses a user controlled device (10, Fig. 1), comprising: a body, movable into a plurality of positions of a three-dimensional space (see page 1, [0002]); and a MEMS acceleration sensor (see page 2, [0027]) coupled to the body and configured to detect 3D movements of said device and send control signals (see page 2, [0026]) correlated to said positions to an electrical appliance (50, Fig. 2).

As to claim 2, Huang discloses the body is in a form selected between computer mouse, joystick, game pad, and PDA (see page 1, [0004]).

As to claims 3, 17, Huang discloses is supported so as to be tiltable around two axes (see Fig. 4)..

As to claim 4, it is well known in the art that a mouse including a yieldable ball for supporting the mouse from the surface.

As to claim 5, Huang discloses the body is a housing accommodating said MEMS acceleration sensor and fixed to an article to be worn by a person (e.g. wrist-watch type mouse, see [0002] at page 1) including a disable person (e.g. using wrist to control the cursor other than fingers.

As to claim 9, Huang discloses the MEMS acceleration sensor generates position signals, the device further comprising a microcontroller for generating said control signals from said position signals (see [0026], [0027] at page 2).

As to claim 11, Huang discloses transmission means for connecting said microcontroller to said electrical appliance, said transmission means including an RF communication port for allowing wireless communication with said electrical appliance (see Fig. 2]).

As to claim 12, Huang discloses micro controller (20, 30, Fig. 2) generates a first control signal for displacing a screen pointer along a first direction upon detection of tilting of said device around a first axis and a second control signal for displacing said screen pointer along a second direction upon detection of tilting of said device around a second axis (see [0035, 036, 0037]).

As to claims 13, 19, 27, 31, Huang discloses micro controller (20, 30) comprises means for detecting activation of predetermined functions upon detecting variations of said position signals greater than first preset thresholds (see [0048] at page 3; and [0050] at page 4).

As to claim 14, Huang discloses functions include clicking functions; continuous clicking; and continuous clicking release (see [0040] at page 3).

As to claim 20, Huang discloses the control signals comprise displacing signals for displacing a screen pointer along two directions (see [0050] at page 4).

As to claim 36, Huang discloses a computer screen; a CPU coupled to the computer screen (see [0030] at page 2); a pointing device (40, Fig. 2) coupled to the CPU; a MEMS sensor

(10) coupled to the pointing device, the MEMS sensor (10) configured to produce position signals corresponding to movement of the pointing device; and a microprocessor (20, 30) coupled to the MEMS sensor configured to convert the position signals of the MEMS sensor to control signals suitable for controlling position of a pointer on the computer screen (see Fig. 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6-7 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 2004/0066371) in view of Davison (US Patent No. 4,682,159).

As to claims 6-7, 35, it is noted that Huang does not specifically disclose that the pointing device is mounted to user's head. However, mounting a pointing device for controlling a cursor on a screen is well known in the art such as taught by Davison. It would have been obvious to one of ordinary skill in the art to have mounted the controller of Huang to user's head in view of the teaching of Davison because Davison provide a hand free cursor control device.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 2004/0066371) in view of Glynm (US Patent No. 5,181,181).

As to claim 8, it is noted that Huang does not specifically the acceleration sensor is an accelerometer. Glynm is cited to teach a wireless mouse similar to Huang. Glynm further discloses that the acceleration sensor is an accelerometer (see Fig. 3). It would have been obvious to one of ordinary skill in the art to have modified Huang's sensor with the features of the accelerometer as taught by Glynm because accelerometer provide same acceleration signal as an acceleration sensor.

7. Claims 10, 15, 21-22, 28-29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 2004/0066371).

As to claim 10, it would have been obvious to use a wire transmission to replace the wireless transmission because they both are well known in the art and they are alternative for each other.

As to claims 15, 21, 28 and 32, it is noted that Huang's MEM sensor is detecting the force applied to the mouse. It would have been obvious to set different threshold values of the force to generate different acceleration values.

As to claims 22, 29, Huang discloses functions include clicking functions; continuous clicking; and continuous clicking release (see [0040] at page 3).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The US 4,565,999, 5,612,132, 5,703,623, and 2003/0063068 are cited to teach a cursor control device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571-272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD HJERPE, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

x.w.
April 2, 2006

XIAO M. WU
Primary Examiner
Art Unit 2629